# SCIENCE & GOVERNMENT REPORT

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# Industry Expanding R&D as Federal Role Declines

A year-end batch of statistics and forecasts confirms the continuing decline of the federal government as both a performer of research in its own laboratories and as a financier of research in industry. But even with the decline of funds from Washington, the national total for R&D is up because of a surprising increase in industrial funding of research.

Federal R&D spending fell by a real 3 percent from 1995 to 1996, while spending by industry went up 3.5 percent. As a result of that increase and prior trends, industry now pays for about two-thirds of all of the nation's R&D—leaving the federal share at its lowest level since the National Science Foundation first gathered statistics on R&D expenditures 44 years ago.

Measured in constant 1987 dollars, industrial spending on R&D rose from $73.6 billion in 1990 to $78.3 billion in 1995; in the same period, federal R&D spending declined from $54.5 billion to $46.9 billion, according to *Science & Engineering Indicators: 1996*, published by the National Science Board.


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Estimates for 1996, as compared to 1995, also show that while industry is increasing its own spending on basic research, the national total in that category remains, as always, especially vulnerable to economic tides and will decline by nearly one percent, in real terms. Industry maintains a hefty presence in basic research, $7.4 billions' worth in 1995, according to NSF, but that sum is overshadowed by Washington's far bigger but sinking contribution, $17 billion. The industrial basic research is often qualified as "targeted" or "directed" basic research, terms subject to varying definitions.

Apart from basic research, a bit of real growth in total national research spending is taking place this year, NSF reports, with applied research rising by a real 1 percent and development by 1.5 percent. The growth in those sectors is in harmony with the rising emphasis in Washington and in industry on utilitarian research and R&D as an elixir of economic growth.

The once-popular expression "science for the sake of science" has disappeared from national dialog about the role and purpose of research, and anyone voicing it today in a Congressional setting would be considered out of touch. It takes a stunning, if dubious, claim such as intimations of life on Mars in rocks on earth to arouse interest in research untied to economic values or medical miracles.

The federal government's progressive retreat into a junior role in the national research enterprise creates numerous consequences—both known and uncertain—for academic research, regional economic development and the direction and culture of science. The trends, reflected in recent reports by the National Science Foundation, the Department of Commerce and the Industrial Research Institute, are likely to continue as the brakes are applied to federal discretionary spending and marketplace competition propels greater industrial spending on R&D.

Though the decline in the federal role is striking on the face of it, a look behind the statistics shows that Washington's retreat from fiscal influence over R&D is greater than the numbers suggest. The national total for R&D this year is

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## In Brief

**NIH Director Harold Varmus has pretty much had his way in shaping up and slimming down the Bethesda behemoth since he came aboard three years ago. But now he's had to change course on his proposal to eliminate the Recombinant DNA Advisory Committee—a drowsy vestige of long-ago fears of monsters escaping from gene-splicing labs. Yielding to outcries that the RAC may someday be needed, Varmus has proposed to keep it going, essentially as a debating society, with a membership reduced from 25 to 15, and real regulatory power lodged in the FDA.**

***Democratic Congressman George Brown, of California, Mr. Science on Capitol Hill when he chaired the House Science Committee, has claimed reelection victory after a count of absentee ballots gave him a margin of 865 votes. But Brown, who has served 16 terms in Congress, may not be home free yet. Still to be authenticated are 2400 ballots in Brown's district and three others around San Bernadino. His opponent, Superior Court Judge Linda Wolfe, has charged that her poll watchers were prevented from observing part of the count. The election is under review by the House Oversight Committee.***

**A proposal to establish a European-wide organization, Euroscience, along the lines of the American Association for the Advancement of Science, is picking up support, including an editorial endorsement from *Nature* magazine November 14. The backers plan to meet at Strasbourg in March to choose provisional officers to discuss elections, bylaws and financing. For information: Francoise Praderie, Observatoire de Paris, 61 Avenue de l'Observatoire, 75014 Paris, France; e-mail: <francoise.praderie@obspm.fr>.**

# . . . Federal R&D Spending Smaller Than It Appears

*(Continued from Page 1)*

around $184 billion, of which industry provided $113 billion, federal agencies $62 billion, universities $5.8 billion and other non-profits $3 billion.

About 55 percent of the federal share belongs to the Pentagon, which generously applies the R&D label to a variety of weapons-design and testing activities that are distantly related, if at all, to what's commonly regarded as research and development. At most, Washington is annually spending about $40 billion on science and technology, rather than the commonly stated $60 or so billion, according to a study published last year by the National Academy of Sciences, *Allocating Federal Funds for Science and Technology*, produced by a committee chaired by former NAS President Frank Press.

While Washington is scratching hard to sustain research funding, industry is steadily increasing its spending, though at a modest pace, according to the Industrial Research Institute (IRI), whose 283 member firms account for about 80 percent of industrial R&D in the US. Reporting on data supplied by 121 of its members, the IRI concludes that "the outlook for industrial R&D is generally optimistic. Nearly 30 percent of the respondents are planning to increase their R&D expenditures by 6 percent or more in 1997, and the overall projected increase in R&D budgets over 1996 is expected to be 5.6 percent."

Stated in current, unadjusted dollars, the IRI's figures are not a direct match for the NSF's "real" money tabulations, but they depict similar trends.

Fifteen percent of the IRI respondents said they expect to increase spending on "directed basic research" by at least 6 percent, and 17 percent said they would increase hiring of new graduates. The IRI noted that in several instances where forecasts for 1997 are below this year's levels, the differences may not be statistically significant and may also be due to a different mix of firms supplying information.

Overall, the IRI report reflected a cheerful degree of confidence that's nowhere to be seen these days in government and academic research organizations.

The responses from the industrial firms also suggested a backing away from what are often regarded as two important areas of growth on the changing economic landscape of R&D. Only 19 percent of the firms said they would increase grants to universities, compared to 24 percent last year; and increases in alliances and joint ventures—including links with federal labs—were planned by 39 percent of the companies, down from 47-52 percent over the past five years.

The IRI samples on alliances and industrial grants to academe are too small to deduce any solid trends. But elsewhere, there's little evidence of growth in these areas, despite a lot of drumbeating by the Clinton Administration about a new era of partnerships in science and technology.

At an IRI meeting in Washington on November 18, the author of the IRI report, Donald Mueller, Vice President for R&D at the Ashland Chemical Company, summarized the state of industrial research as follows: "R&D today is healthy and growing at a sustainable pace."

The NSF report, by Steven Payson, in the Foundation's Division of Science Resources Studies, spells out a series of declines on the government side of the R&D ledger and a number of increases in industrial funding.

- Industry is expanding R&D with its own money. Federal support for research in industry continues downward, from 32 percent of total industrial R&D in 1987 to 17 percent this year.
- Funding of R&D in the government's own research facilities—which perform 9 percent of all the nation's R&D—is expected to total $16.2 billion this year, 3.2 percent below the 1995 level.
- Universities and colleges perform 12 percent of all R&D, with financing, from all sources, expected to total $22.4 billion this year. The sums are virtually unchanged from 1995 to 1996.
- Real growth in R&D spending averaged an annual 6.6 percent increase from 1980-85, but from 1985-96, it dropped

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## *Tracking the R&D Shifts*

***NSF Data Brief No. 11*, order from: NSF, Division of Science Resources Studies, Suite 965, Arlington, Va. 22230; tel. 703/306-1773; fax 703/306-0508; e-mail: <pubs@nsf.gov>.**

***Industry R&D Expenditures, 1977-1995, Preliminary Estimates*, order from: Office of Technology Policy, Technology Administration, Room 4814C, US Department of Commerce, Washington, DC 20230; tel. 202/482-5687; fax 202/482-4817.**

***R&D Trends Forecast for 1997, Including Results from IRI Counterparts in Other Countries*, order from: Industrial Research Institute, 1550 M St. NW, Washington, DC 20005-1712; tel. 202/296-8811; fax 202/776-0756.**

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# . . . Openness Threatened by University-Industry Ties

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to 1.4 percent, as R&D received a declining share of the nation's economic growth.

• Compared to other countries, the US is both ahead and behind in R&D statistics, spending more than Japan, Germany, France and the UK combined, but lagging behind Japan, Germany and France in the percentage of GNP spent on civilian research.

Data presented at the IRI meeting by Graham R. Mitchell, Assistant Secretary of Commerce for Technology Policy, showed that total industrial R&D spending steadily rose from 1988 through 1994, despite ups and downs in sales, capital investment and net income. During that seven-year period, R&D rose by a real 29.8 percent, while net sales were up 10.4 percent and capital expenditures 6 percent. US economic growth, Graham said, is increasingly linked to the heavy spenders in industrial R&D.

Industry's big and growing dominance in research has already had a big impact on science, with more to come. The issue of secrecy in academic research was laid to rest in the early days of the Cold War when virtually all research universities and their professional associations championed openness as an essential criterion of academic culture. But the secrecy issue is back again, in what is probably a more troubling form, as universities court industrial support and find that the money often comes with restraints on publication and disclosure of work in progress.

The issue was nicely summed up by Jonathan Beckwith, Professor of Microbiology and Molecular Genetics at Harvard Medical School, in one of a series of faculty commentaries under the heading of "The Courtship of Business and Science" in the September 6 issue of *Focus*, a Harvard newsletter:

"I think it's good that more academic researchers are working to move basic scientific research into applied areas," the Harvard researcher stated. "On the other hand, getting involved with biotech firms can create problems, such as secrecy and directing research in the lab toward areas that are not necessarily good research training in itself but might generate some product for the company. I know that does happen.

"It can also potentially restrict you in your ability to be critical of industrial practices when they're exploitative and maybe dangerous," Beckwith continued. "It's often from the university that people have felt the freedom to offer criticisms of various practices of industry. But as scientists in biology get more incorporated into the industrial sphere, then they can be more restricted in doing that."

The pursuit of industrial money also raises issues of academic pandering in developing research and training programs. The irony is that industry finances a rather small slice of academic research—perhaps 6-7 percent of the total—and much of it is concentrated in a handful of major research universities.

## *Worldwide R&D Boom*

Reporting on the Industrial Research Institute's first survey of research in other major industrialized nations, IRI President Jerry A. Cogan says their R&D spending is on the rise, and "the trends are diminishing any national advantage we had in the past." Increased internationalization is another trend in industrial R&D, Cogan said, with foreign firms building or acquiring research facilities in the US and American companies doing the same abroad.

The IRI survey drew its data from industrial-research associations in Australia, Canada, Europe, Japan and Korea, and was presented November 18 at an IRI meeting in Washington.

Cogan, President of Milliken Research Corporation, Spartanburg, South Carolina, noted in particular that "South Korea is adding thousands of scientists and engineers to their industrial organizations. Where are they coming from?" he asked. Answering his own question, he said, "Quite a few from the US."

The rapid expansion of industrial R&D in Korea was also noted by Assistant Secretary of Commerce for Technology Policy Graham R. Mitchell, just back from a visit to that country. South Korea, he said, "is full of returned scientists and engineers from the US."

Drawing on responses from 110 members of the Korea Industrial Technology Association, the IRI survey turned up ambitious plans across a wide spectrum of industry. Thirty-six percent of the companies said they expect to raise R&D expenditures next year by at least 10 percent.

Thirty-five percent reported that hiring of new graduates would increase by 6 to 10 percent. Thirty-three percent were also in the 6-10 percent range in plans for increasing grants and contracts for university-based R&D, while 12 percent of the Korean companies said the increases in that category would be at least 10 percent.

But the scarcity, combined with overblown expectations of industry as an alternative to federal research support, intensifies the bidding for industrial money.

Finally, Washington no longer has anything to offer states and regions seeking scientific and high-tech facilities as cornerstones for economic development. There are no more Super Colliders or space facilities in the pipeline, and scarcely any government money for lab buildings.

Industry, however, has an ample purse for building eagerly sought-after manufacturing and research facilities and can demand heavy inducements in the form of tax holidays, publicly financed infrastructure and training programs, all at heavy costs to public treasuries. State universities, also dependent on those treasuries, are poor competitors for scarce public dollars.—DSG

# "Space Summit" to Review NASA's Cash Plight

With more programs under way and planned than money to pay for them, and additional budget cuts scheduled, NASA is to be the subject early next year of an unusual "space summit" at the White House in which the President and Congressional leaders are expected to reconsider the gloomy fiscal future of the civilian space program.

The summit was originally scheduled for early January, but the timing was uncertain last week and the meeting date may be moved to early February, just prior to release of the President's budget for fiscal 1998.

The face-to-face review of a single agency by the heads of the two branches of government is unusual, if not unprecedented, and signifies the desperate plight of NASA. But whether it's a first step toward relief for NASA, and perhaps a precedent for rescuing other hardpressed government programs, is by no means certain. At the White House Office of Science and Technology Policy, which is organizing the summit, a source told SGR last week that the basic choices are "to modify the budget or the package or both."

Financial salvation, and even prosperity, could easily be achieved for NASA by terminating the misbegotten International Space Station, which currently consumes over half the space budget in direct construction costs and in delivery services by the cumbersome Space Shuttle. But though increasingly recognized as irrelevant to space science and technologically mundane, the Space Station has acquired a strong industrial constituency and a foreign-policy rationale as a welfare program to keep Russian space specialists out of mischief. At this point, it's virtually unkillable.

Extensive preparations are going into the space summit. In late October, the Space Studies Board at the National Academy of Sciences held a two-day meeting to review the space program and to select briefers for a meeting scheduled for December 11 with Vice President Gore. Gore, in turn, is to brief Clinton in preparation for his meeting with Congressional leaders, which is tentatively booked for an hour or two—a major block of time on the Presidential schedule.

At this point, the summit is being presented as an exercise in bipartisan cooperation in the public interest. But politics and hard feelings lurk everywhere in relations between the Clinton White House and the Republican Congress, which is holding the Presidential feet to the fire on his campaign promises of a balanced budget by 2002. In the Congressional appropriations structure, NASA shares a pot of money with the Department of Veterans Affairs and the Department of Housing and Urban Development. Both are backed by powerful constituencies, especially the DVA, to which non-vet Clinton was prudently generous in his first term.

As a lame duck, he might resist the veterans organizations' unceasing demands for bigger budgets, thus freeing additional money for NASA. The essential fact is that financial relief for NASA must come out of the hide of some other government enterprise.

Along with HUD and the DVA, NSF is bunched with NASA in the Congressional Appropriations Committees. Any good news for NASA almost certainly means bad news for the politically frail NSF.

# Kessler, O'Leary and Others Head for the Exit

Many jobs are waiting to be filled or officially confirmed in the federal research bureaucracy when the government emerges from its post-election, holiday-season slowdown.

David Kessler, Commissioner of the Food and Drug Administration, became the latest to join the departure list when he announced last week that he wants out early next year. Kessler, a Bush holdover, said six years is enough, and that appears to be the whole story.

At the Department of Energy, Secretary Hazel O'Leary is on the way out after four rough years of "strategic realignments," as budget-induced shrinkage is called at DOE, and repeated batterings by the press and Congress for her foreign travel extravaganzas.

At the Department of Agriculture, Catherine Woteki, the Acting Under Secretary for Research, Education and Economics, is in line for a full-fledged appointment to the job—a Presidential appointment, subject to Senate confirmation. Woteki has the strong backing of her former boss at the White House Office of Science and Technology Policy, Presidential Science and Technology Advisor John Gibbons.

So far, the signs are that Gibbons is staying on, but with Washington in a kind of administrative coma these days, clues of change are scarce. Two of the four Associate Director posts at OSTP remain filled on an acting basis, pending Senate confirmation—Environment, held by Jerry M. Melillo, and National Security and International Affairs, held by Kerri-Ann Jones.

Nine of the 24 seats on the National Science Board, the parttime policymaking body for the National Science Foundation, have been vacant since last May. After long delays at the White House, nominations were sent to the Senate, which dawdled and left them hanging for the 105th Congress.

There are a number of vacancies on the fulltime staff at NSF, including Deputy Director, the number two spot, another Presidential appointment, subject to Senate confirmation.

The Senate has not yet set a schedule beyond a return date of January 7. The House, also back on that date, tentatively plans long recesses in both January and February.

# Non-Profit Pay Checks

## *The American Enterprise Institute*

Among the several Washington-based think tanks on the conservative side of economics, politics and social issues, the American Enterprise Institute for Public Policy Research is sort of a rightish version of the venerable, staid and centrist Brookings Institution.

AEI, as it's known, is not as hawkish as the Heritage Foundation, which claims patrimony for the Gingrich sweep of 1994. Nor is it as disdainful of virtually all things governmental, which is the default setting for the libertarian Cato Institute. With 125 employes, including 45 scholarly types, AEI houses a few political flamethrowers, like Robert Bork, the Supreme Court reject, who is titled the John M. Olin Scholar in Legal Studies. But the overall output at AEI tends to be non-abrasive, action-oriented research. The stated goal is to illuminate what AEI President Christopher DeMuth describes as "the limitations and difficulties of government action and the virtues of free markets, private enterprise and individual responsibility..."

Alone among the research centers on the right, AEI has undertaken several serious studies of science and technology policy issues, solo and in collaboration with Brookings. It's also homebase for Norman J. Ornstein, a TV favorite for instant political analysis. Charles Murray, co-author of *The Bell Curve: Intelligence and Class Structure in American Life*, is a fellow at AEI.

Calendar year 1995, for which AEI filed its tax return last month (following a routine extension of time), was a good year financially for the organization. Revenues, mainly from corporate donors and philanthropic foundations (both of which AEI declines to identify), totaled $16.5 million, an increase of $3 million over 1994, providing an "excess," in non-profit terminology, of $3.9 million.

Holding non-profit, tax-exempt status under section 501(c)(3) of the Internal Revenue Code, AEI is required to report the compensation and benefits of all officers and the five highest paid employes, and to make the tax form, IRS 990, available for public inspection promptly upon request.

The tax returns report big-league non-profit pay for the head man, medium high-scale for the number two spot, and then a sharp drop to mediocre recompense, on a par, say, with federal government and academic senior salaries.

AEI President DeMuth received $318,000 in compensation in 1995, according to the tax return for that year, plus $19,427 entered under the heading "contributions to employe benefit plans and deferred compensation." In 1994, the figures for DeMuth were $320,160 and $24,940. No entries for DeMuth or others at AEI were listed for "expense account and other allowances."

Compensation and benefits for other officers on the 1995 return:

David Gerson, Executive Vice President, $178,000, $19,478, after which the numbers fall off.

Laurie F. Gardner, Controller, $83,750 and $10,901.

Entries for the five highest-paid employes, other than officers, were as follows, with all holding the title of Scholar and listed as working full time:

J. Gregory Sidak, $108,750, $13,725.

Douglas Besharov, $108,020, $14,365.

Michael Novak, $100,000, $14,556.

Charles Murray, $100,000, $13,252.

Robert Hahn, $95,000; $12,510.

Under the direction of Claude Barfield, head of AEI's Science and Technology Policy Studies, a series of reviews are planned on the condition and future of the American research enterprise. Support for the project includes $270,000 from the Packard Foundation. The first phase is focused on biomedical research, in collaboration with Brookings and the Federation of American Societies for Experimental Biology.

Another study, titled "Federal Support for Science: The Likely Decline and Its Consequences," is being conducted by Kenneth Brown, former head of the Division of Science Resources Studies at the National Science Foundation. Brown informally refers to his project as "a study of the downsizing of science."

Other science-policy projects in the works, with various university-based researchers and others signed on or invited, include studies of federal-private research consortia and partnerships and the quality of data used in the making of science-policy decisions.

*Previous Pay Checks: Howard Hughes Medical Institute, April 15; National Academy of Sciences, May 1; American Chemical Society, May 15; American Psychological Association, June 1; American Association for the Advancement of Science, June 15; American Psychiatric Association, July 1; Association of American Medical Colleges, August 1; American Council on Education, September 15; Association of American Universities, October 1; Pharmaceutical Research and Manufacturers of America, October 15; Heritage Foundation, November 1; American Medical Association, November 15.*

***Next: Federation of American Societies for Experimental Biology***

# *DOE Settles Radiation Cases*

With windy rhetoric and a few bucks, the US government is doing penance for early post-war experiments in which 12 humans were injected with uranium and plutonium. The sole survivor of the experiments, plus families of 11 deceased subjects, will share $4.8 million in a settlement agreed to by the Departments of Energy and Justice.

The settlement was announced last month by DOE Secretary Hazel O'Leary, who said, "This settlement goes to the very heart of the moral accountability the government owes to its citizens." One claim was previously settled and four others are pending, according to DOE.

The Clinton Administration has, in fact, been far more open about the experiments than its predecessors, who all buckled to the secrecy mania deep in the genes of the presentday version of the old Atomic Energy Commission.

# Health Insurance: Brain Transplants, Fully Covered

*Since turning 65 this year, SGR Editor Greenberg has found that birthday was a signal for the telemarketing industry, which, in call after call on behalf of one health-care firm or another, promises wondrous protection against the skimpiness of Medicare coverage. From one of these calls, the following was recorded between the caller, Him, and Me.*

•

**Me.** Do you cover all the medical procedures?

**Him.** We cover what the Medicare doesn't cover.

**Me.** We're trying to find out, what about brain transplants?

**Him.** You're wondering how much we cover of that?

**Me.** Yeah, how much of a brain transplant do you cover?

**Him.** We would cover all of what the Medicare doesn't cover.

**Me.** Does that mean the brain transplant and all....

**Him.** Yeah, if you had a brain transplant with our plan, you'd use our doctors and our hospitals.

**Me.** Any one of your hospitals, or do you have a special brain transplant hospital?

**Him.** No, you'd use the hospital, wherever they send you. If they have a hospital where they do brain transplants, you'd use that. If not, whatever hospital was available. But with our plan, you're not going to pay any out-of-pocket expense.

**Me.** You mean, I can get a complete brain transplant and there's no out-of-pocket?

**Him.** Right. If you use our plan and use our doctors, what you do on our plan, it's an H.M.O. plan. It's going to cover what the Medicare would have covered, but also what the Medicare doesn't, so that you're not paying anything for your hospitalization.

**Me.** How much do you cover for a brain transplant?

**Him.** Okay. As I said, you wouldn't pay any out-of-pocket

**Me.** Do they do that on a day basis, or do you have to go into the hospital? For a brain transplant.

**Him.** Oh, I don't know about the medical procedure, but I would think for a brain transplant that wouldn't be something—I mean, that would require a hospital stay.

**Me.** They don't do that on an outpatient basis?

**Him.** For what?

**Me.** For a brain transplant.

**Him.** I don't think so, sir.

**Me.** You go into the hospital for a couple of days probably?

**Him.** Yeah, two, three or four.

**Me.** And that's all covered, right?

**Him.** I'm not familiar with brain transplants.

**Me.** Do you get a private room or do you have to be in a big room with a lot of other people? After a brain transplant, you probably want to get a lot of sleep.

**Him.** Do you think so?

**Me.** I guess so. You probably have an awful headache.

**Him.** Yeah, but aspirin is amazing.

**Me.** So, what do I have to do?

**Him.** We're just giving people an opportunity to look at our plan and just compare the coverage.

Literature arrived, containing no mention of brain transplants.

# To the Editor:

In "Academic Research Funding, the Rich Get Richer," SGR [November 1] reports on the absolute increases in federal research dollars received by the top 50 universities between 1980 and 1994. Viewed in terms of relative shares, a different picture of the trends emerges.

As Roger Geiger and I reported in "The Dispersion of Academic Research in the 1980s" (*Journal of Higher Education*, May-June 1995), although almost all universities experienced absolute increases in federal research dollars from 1980 to 1994, the relative share of the top 20 fell from 33.9 percent to 31.8 percent. Overall, 33 of the largest performers lost share and 17 gained share during this period.

The aggregate loss of the top cohort resulted from increases achieved by universities initially ranked between 61 and 100 (24 universities in this group gained share, while 16 lost share). There also was a slight increase in the share received by institutions ranked between 100 and 200.

In terms of quality rankings, losses in share were reported by about one-half of the nation's most prestigious universities, public and private; few gained share. Gains were concentrated in those universities with departments initially ranked fairly good to very good. Medical and quasi-medical universities are a notable exception to this general pattern: overall, these universities gained share independently of initial R&D expenditure or quality ranking.

As growth in federal support of academic research slows, the findings raise at least the following issues:

- The effects of competition among an increased number of performers of academic R&D on several aspects of the university-federal relationship, such as the increased leverage this competition provides federal agencies as they elicit cost-sharing contributions (e.g., price reductions) from universities.
- The sustainability of the research threshold achieved by many universities in light of the squeeze between the increasing proportion (to approximately 18 percent in FY 1993) of academic research expenditures supplied by institutional funds, and budgetary and political pressures on tuition levels and state appropriations.
- The divergence between the increased dispersion of academic R&D expenditures among *institutions* noted above and the continued geographic concentration of expenditures among *states* (with the top ten states performing approximately 54 percent and the bottom ten states approximately 2.4 percent of academic R&D in FY 1993).

***Irwin Feller*, Director, and Professor of Economics, Institute for Policy Research and Evaluation, Penn State University**

# In Print

*(Continued from Page 8)*

**From Resources for the Future:**

***Resources*** (no charge), quarterly report on environmental and economic topics in the purview of one of Washington's prominent policy-research centers. The fall issue (24 pp.) includes articles on ozone standards, environmental issues in the District of Columbia, pesticide regulation in food, etc.

**Order from: Resources for the Future, 1616 P St. NW, Washington, DC 20036-1400; tel. 202/328-5025; fax 202/939-3460; Internet: <http://www.rff.org>.**

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**From the US Geological Survey:**

***FY 1995 Yearbook of the US Geological Survey***, covers the Survey's programs, policy changes, budgets, personnel, etc., available in the usual print version (106 pp.) soon to come off the press, and, for the first time, on the Internet <http://yearbook.usgs.gov> and on a CD-ROM which can automatically connect to the World Wide Web for updates. There is no charge for the *Yearbook* in any of its various forms.

**For ordering information: US Geological Survey, Branch of Information Services, PO Box 25286, Denver, Colorado 80225; tel. 1-800/USA-MAPS.**

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**From the Institute of Medicine:**

***Publications List*** (46 pp., no charge), brief summaries of hundreds of health-policy reports and various other studies published by the IOM, some dating back 20 years, along with instructions for ordering copies. The topics range across the health sciences, public-health, medical education, health-care economics and many other topics that have engaged the scientific and medical establishments in recent years.

**Order from: Institute of Medicine, Reports and Information Office, 1055 Thomas Jefferson St., Washington, DC 20007; tel. 202/334-2169; fax 202/334-1412.**

# *Job Changes & Appointments*

***Douglas K. Hall*** stepped down November 15 after three years as Assistant Secretary of Commerce for Oceans and Atmosphere and Deputy Administrator of the National Oceanic and Atmospheric Administration, and has returned to the Nature Conservancy, Arlington, Va., as Chief Operations Officer.

***Rita A. Bajura***, a career employe of the Department of Energy, has been appointed Director of DOE's Federal Energy Technology Center, which is to manage clean-coal and other fossil energy programs at Morgantown, W.Va., and Pittsburgh, Pa., as part of the Department's downsizing plans. Bajura has been serving as Acting Director of the Morgantown facility since last October.

***Elizabeth Baldwin***, Senior Legislative and Federal Affairs Officer in the Public Policy Office of the American Psychological Association, has been appointed to the newly created post of Public Policy Manager of the Washington-based Optical Society of America, effective December 2.

## *Questions? Comments? Suggestions?*

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**From World Resources Institute (WRI):**

***New Partnerships for Sustainable Agriculture*** (137 pp., $13.45, plus $3.50 for shipping), case studies on what are described as "practical alternatives to conventional, chemical intensive agriculture" in Bangladesh, the Philippines, Cuba, Nicaragua, Peru, Kenya, Senegal, California and Iowa.

The collection is edited and contains an overview by Lori Ann Thrupp, Director of Sustainable Agriculture in WRI's Center for International Development and Environment. Thrupp was formerly a post-doctoral fellow at the University of California, Berkeley, and has worked in agriculture in Central America.

**Order from: WRI Publications, PO Box 4852, Hampden Station, Baltimore, Md. 21211; tel. 1-800/822-0504 or 410/516-6963.**


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# In Print

## Official reports and other publications of special interest to the research community

*(Copies of publications listed here are available from the indicated sources—not from SGR)*

**From the National Academy of Sciences:**

***The Hidden Epidemic: Confronting Sexually Transmitted Diseases*** (about 300 pp., $45, plus $4 for shipping), reports the US leads all industrial nations in the rate of curable sexually transmitted diseases, with 12 million new cases a year, including 3 million among teen-agers. Strong education programs, in schools and through pop culture, are needed to deter teen-agers from sex or at least to encourage them to be careful about it, the report states.

Venturing into contentious territory, it recommends making condoms available through schools, and asserts that there's no evidence that condoms or sex education promote sexual activity. Also needed, the report stresses, are resources for improved surveillance by the Centers for Disease Control and Prevention.

The report was produced for the Institute of Medicine, health-policy arm of the Academy, by a committee chaired by William T. Butler, Chancellor, Baylor College of Medicine. Thomas R. Eng of the IOM staff was Senior Program Officer for the project.

***Tactical Displays for Soldiers: Human Factors Considerations*** (available in January; estimated price, $45.95, plus $4 for shipping), by a panel of the Academy's Commission on Behavioral and Social Sciences and Education, a skeptical assessment of a proposed helmet-mounted information-display screen for the US Army's "21st Century Land Warrior System." Described as a "flip-down monocular presentation device," the display unit is intended to provide "situation awareness," tactical information, navigation assistance and other data to troops on the battlefield.

The report says more research is needed to assure that the displays don't confuse or impede the troops and to compare it with alternative systems.

Anne S. Mavor of the Academy staff was Study Director for the Report, which was produced by the Panel on Human Factors in the Design of Tactical Display Systems for the Individual Soldier, chaired by William O. Blackwood, of Hay Management Consultants, Arlington, Va.,

***Managing Managed Care: Quality Improvement in Behavioral Health*** (two volumes, $45 plus $4 for shipping), says strict requirements should be established to assure the availability of mental-health and substance-abuse services under managed-care plans. Also recommended: clarity in describing insured health-care benefits and elimination of the so-called gag clauses on insurance policies.

The study, financed by the US Department of Health and Human Services, was produced by a committee chaired by James Grossman, Chairman and CEO of Health Quality LLC, Boston. Margaret Edmunds of the IOM staff, was Study Director.

**Order from: National Academy Press, 2101 Constitution Ave. NW, Washington, DC 20418; tel. 1/800-624-6242 or 202/334-3313.**

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**From the American Psychological Society (APS):**

***Update on Behavioral and Social Sciences Research at NIH*** (no charge), by Alan Kraut, Executive Director of APS (which consists mainly of academic researchers), a review of NIH-related legislation in the last Congress of interest to the profession, including prods for more research on behavioral interventions in drug treatment, an increase in National Research Service Awards in behavioral fields, etc.

Kraut concludes, "As Congress was being so generous with NIH, it also sent a series of strong messages to NIH proposing new directions for expanding and strengthening its behavioral science portfolio." The update is accompanied by Congressional reports, a budget summary and other materials.

**Order from: American Psychological Society, 1010 Vermont Ave. NW, Suite 1100, Washington, DC 20005-4907; tel. 202/783-2077; fax 202/783-2083.**

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**From the Cato Institute:**

***Beyond the Communications Decency Act: Constitutional Lessons of the Internet*** (Policy Analysis No. 262; 42 pp., $6), by Solveig Bernstein, Assistant Director of Telecommunications and Technology Studies at Washington's leading libertarian think tank, an analysis of the grandstanding Communications Decency Act, which seeks to shield under-18s from any computer-delivered "comment, request, suggestion, proposal, image, or other communication that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards, sexual or excretory activities or organs."

Arguing that the Act is unconstitutional, as some members of Congress conceded even as they voted for it, Bernstein says Internet purity should be entrusted to parental guidance and software filters.

***EPA's Cancer Risk Guidelines: Guidelines to Nowhere*** (Policy Analysis No. 263; 44 pp., $6), says the Environmental Protection Agency's proposed new guidelines for conducting cancer risk assessments are faulty in many respects, principally a downgrading of the importance of statistical significance that "will likely lead to regulation of more chemicals, with associated costs, that will have no effect on human health."

The report is by Cato's Director of Science and Risk Studies, Michael Gough, an alumnus of the late Office of Technology Assessment, and Steven Milloy, President of the Environmental Policy Analysis Network.

**Order from: Cato Institute, 1000 Massachusetts Ave. NW, Washington, DC 20001; tel. 202/842-0200; fax 202/842-3490; Internet: <http://www.cato.org/pubs/pas/pa-262es.html>.**

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